

FEL'DMAN, S.N.; BOMBEL', A.V.; ROZENBLAT, O., vrach-laborant;
BULGAKOVA, Yu.A., vrach-laborant

Letter to the editor concerning G.P. Stepanov's article,
"Sterilization of Francke's **needles** by heating for the purpose
of preventing viral hepatitis." Zhur. mikrobiol., epid. i
immun. 33 no.1:158-159 Ja '62. (MIRA 15:3)

1. Zaveduyushchaya laboratoriyey Sanatoriya imeni Ivanova,
Odessa (for Fel'dman). 2. Zaveduyushchiy laboratoriyey
Sanatoriya "Solnechnyy", Odessa (for Bombel'). 3. Sanatoriya
"Yuzhnyy", Odessa (for Rozenblat, Bulgakova).

(STERILIZATION)
(HEPATITIS, INFECTIOUS)

ROZENBLAT, N. [Rozenblit, N.], inzh. (Pulkova)

Man on the moon. Znan, ta pratsia no.1:26 Ja '59.

(MIRA 12:10)

1. Spetsial'nyy korespondent zhurnalu "Znannya ta pratsya."
(Space flight to the moon)

Grinfel'd, A.A. Rozenblat, O.P., and Nikolayeva, V.L. "Results of studying the effectiveness of inoculations with the Dyuran-Krontovskiy vaccine", Vracheb, delo, 1949, No.1, paragraphs 69-72.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 9, 1949)

A. J. A. , D. A. , L. A.

Moscow, 1950. 135 p.

Pamphlet dealing with bacteriological warfare based on materials shown at the war trials of Japanese war criminals at Khavosk purportedly to show US preparation in field of bacteriological warfare; published by the Academy of Sciences, USSR.

* ROZENBLIT, S. YA. - as originally reported.
changed - agree with other sources

ROZENBLAT, V., kand.med.nauk (Sverdlovsk)

To prevent fatigue... Okhr.truda i sots.strakh. 5 no.11:18-19
N '62. (MIRA 15:12)

(Industrial hygiene)

30(1)

SOV/99-59-10-1/11

AUTHOR: Ben'yaminovich, E.M., Korotkov, P.A., Nikolayev, Ye.M.
and Rozenblat, V.F., Engineers

TITLE: The South Golodnaya Step' Canal

PERIODICAL: Gidrotekhnika i melioratsiya, 1959, Nr 10, pp 3-16
(USSR)

ABSTRACT: The Golodnaya step' area of Uzbekistan and Kazakhstan contains 600,000 hectares of land suitable for irrigated cotton-growing. For this reason the area has been the subject of many development and reclamation projects, attracting the attention even of the Soviet hydraulic engineers G.K. Rizenkampf, F.P. Morgunenko and V.F. Bulayevskiy. Several plans for the irrigation of the area have been drawn up; however, the final variant, approved by the CC of the CPSU and the Soviet ministrov SSSR (Council of Ministers of the USSR) on 14 June 1958, provided for irrigation of the Golodnaya step' by two canals - the existing North Canal

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imeni Kirov and the South Golodnaya Step' Canal, still under construction. The water for these canals was to be drawn from the Farkhad Dam via the derivation canal of the Farkhadskaia GES (Farkhad Hydroelectric Plant) with a throughput of 500 cu m/sec. The general layout of the system may be seen from Fig 1. The area covered by the North Canal contains about 250,000 hectares suitable for irrigation, of which some 180,000 hectares have now been reclaimed, while the South Golodnaya Step' Canal dominates an area containing 350,000 hectares of land suitable for irrigation. Of this about 40,000 hectares have so far been reclaimed. It is proposed to set up 31 cotton-growing sovkhozes and several horticultural sovkhozes in the new irrigation areas. About 50-55% of the total irrigated area will be under cotton and each new sovkhoz will cover around 8-10 thousand hectares. Watering will mainly be effected by pipelines in long furrows. Sprinkling will be used on farms in the South-West part of the Golodnaya step' where the ground is uneven and the soils have a comparatively high degree of permeability. All

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the control devices on the main and subsidiary canals will be automated and telemechanized. The hydraulic installations in the internal farm irrigation networks will be fitted with automatic hydraulic gates and water meter devices. The author then gives a very detailed account of the basic aspects of the design and construction of the South Golodnaya Step' Canal. There are 8 diagrams, 2 tables and 1 map.

ASSOCIATION: Sredazgiprovdokhlopok

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ROZENBERG, Vsevolod Aleksandrovich; POPOV, Nikolay Aleksandrovich;
GAVRENKOV, I.T., red.; GUMBINA, S.V., tekhn.red.

[Reforestation of unforested areas of the Maritime Territory]
Vosstanovlenie lesov v bezlesnykh raionakh Primor'ia. Vladivostok, Primorskoe knizhnoe izd-vo, 1960. 13 p.

(MIRA 13:10)

(Maritime Territory--Reforestation)

ANDREYEV, V.A.; KOLODEVICH, D.P. [deceased]; ROZENBLAT, V.F.;
CHIZH, I.B.

New technique of operating the South Golodnaya-Steppe Canal.
Mat. po proizv. sil. Uzb. no.15:326-331 '60. (MIRA 14:8)

1. Sredneaziatskiy nauchno-issledovatel'skiy institut
irrigatsii, Tashkent, i Institut "Sredazgiprovedkhlolik",
(South Golodnaya-Steppe Canal)
(Remote control)

UNZHIN, R.V.; ROZENBLAT, V.V.

Transistorized device for radiotelemetric registration of the frequency of heart contractions, respiration and movements.
Biul. eksp. biol. i med. 57 no. 2:117-121 F '64.
(MIRA 17:9)

1. Laboratoriya funktsional'noy diagnostiki (rukovoditel' -
kand. med. nauk V.V.Rozenblat) Nauchno-issledovatel'skogo instituta
gigiyeny truda i professional'noy patologii (dir. - kand. biolog.
nauk V.A.Mikhaylov) i laboratoriya meditsinskoy radioelektroniki
(zav. A.T.Vorob'yev) Gorodskogo vrachebno-fizkul'turnogo
dispansera (glavnyy vrach M.B.Kazakov), Sverdlovsk. Predstavlena
deystvitel'nym chlenom AMN SSSR V.V.Parinym.

ROZENBLAT, V.V.

34143. Rozenblat, V. V. O fenomene Sechenova pri staticheskikh napryazheniyakh. Sravnit. Effektivnost' razlichnykh form aktivnogo otdykha. (K 120-letiyu so dnya rozhdeniya I. M. Sechenova). Teoriya i praktika fiz. Kul'tury, 1949, vyp. 10, s. 733-40.-----Bibliogr: 14 nazv.

SO: Knizhnaya letopis' No. 6, 1955

ROBINSON, V. V. --

"Materials Relating to the Study of the Mechanisms of Fatigue and Rest in Static Disturbances." Cand Med Sci, Molotov Medical Inst, Sverdlovsk, 1953. (REMBiol, No 4, Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

SO: Sum. No. 461. 5 May 55

ROZENBLAT, V.V.

New design of mercury dynamometer. Fiziol.zhur. 39 no.6:734-738 N-D
'53. (MLRA 6:12)

1. Kafedra normal'noy fiziologii Sverdlovskogo meditsinskogo instituta.
(Dynamometer)

ROZENBLAT, V.V., kandidat meditsinskikh nauk (Sverdlovsk)

Before the flight into the cosmos. Nauka i zhizn' 23 no.11:25-28
N '56. (MLRA 9:11)

(Interplanetary voyages)

ROZENBLAT, V.V.

Effect of emotional stress in playing chess on arterial pressure.
Vrach.delo supplement '57:89 (MIRA 11:3)

1. Sverdlovskiy gorodskoy vrachebno-fizkul'turnyy dispanser.
(CHESS--HYGIENIC ASPECTS) (BLOOD PRESSURE)

USSR / Human and Animal Physiology. Physiology of Work T
and Sport.

Abs Jour: Ref Zhur-Biol., No 22, 1958, 102327.

Author : Skryabin, V. V.; Rozenblat, V. V.

Inst : Not given.

Title : On the Endurance of Static Strain by Various
Muscle Groups

Orig Pub: Teoriya i praktika fiz. kul'tury, 1957, 20, No 8,
597-600.

Abstract: By means of a mercury dynamometer, the endurance
to static exertion was studied in untrained indi-
viduals and in athletes; as its index, the duration
of unremitting execution of the static exertion was
taken which was equal to half of the maximum force
of the given muscle group. Maximum endurance to

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ROZENBLAT, V.V.

Additional data on changes in muscular working capacity influenced by the activity of other muscle groups [with summary in English]
Biul.eksp.biol. i med. 43 no.3:16-19 Mr '57. (MLRA 10:7)

1. Iz kafedry normal'noy fiziologii (zav. - prof. N.K.Vereshchagin)
Gosudarstvennogo meditsinskogo instituta i iz Gorodskogo vrachebno-
fizkul'turnogo dispansera (glav. vrach M.B.Kazakov), Sverdlovsk.
Predstavlena deystvitel'nym chlenom AMN SSSR V.N.Chernigovskim.

(HAND muscles & tendons

changes in working capacity of hand muscles as influenced
by work of asymmetrical muscles of other hand (Rus))

L 24678-65 EWG(j)/EWT(d)/FBD/FSS-2/EWG(r)/EWT(1)/FS(v)-3/EEG(k)-2/EWG(v)/EPR/EWG(L)/
 EEG(c)-2/EWG(c)/FS(b) Pb-l/Pn-l/Po-l/Pe-5/Pq-l/Pao-l/Pg-l/Ps-l/Pae-2/Pn-l/Pk-l/Pl-l
 ACCESSION NR: AP5004710 IJP(c) BC S/0239/64/050/009/1191/1193

AUTHOR: Parin, V. V.; Rozenblat, V. V.

TITLE: Second symposium on biotelemetry in Sverdlovsk

SOURCE: Fiziologicheskii zhurnal SSSR, v. 50, no. 9, 1964, 1191-1193

TOPIC TAOS: telemetry, telemetry equipment, medical science, biotelemetry

ABSTRACT: The Second Symposium on Radiotelemetry in Physiology and Medicine was held in Sverdlovsk, 9 -- 11 December 1963. Of the 34 reports presented, half were by individuals from Sverdlovsk, the Soviet center for telemetry. Listed below are some of the contributors, together with the subjects discussed.

V. V. Parin and R. M. Bayevskiy. Biotelemetry classification system based upon the types of apparatus used and their proximity to the subject being investigated.

V. G. Denisov and V. I. Yazdovskiy. Present state of biotelemetry and its use in space.

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B

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ACCESSION NR: AP5004710

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Ye. B. Babskiy. Use of internal radio transmitters for studies of the gastrointestinal tract.

V. V. Rozenblat. Physiological studies of sports and labor through the use of biotelemetry.

B. V. Panin. Physiological studies of the gastrointestinal tract of domestic animals under pasture conditions by means of external radiocapsules which transmit data over a distance of a few kilometers.

I. T. Akulinichev. Characteristics of the biotelemetric systems used for physiological measurements aboard Vostok 5 and 6.

R. M. Bayevskiy and others. Dynamic telemetric systems and their applications in space medicine, particularly in long future space flights where cosmonauts will have to be fitted with systems which will allow them to move freely inside and outside the space craft.

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ACCESSION NR: AP5004710

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R. S. Dadashev and G. M. Erdman. Radiotelemetric monitoring of atmospheric pollution around industrial sites.

R. V. Unzhin. Selection of a symmetrical multivibrator as a far more acceptable transformer in semiconductor transmitting devices used for the registration of a number of physiological parameters.

V. M. Forshtadt. Registration of the volumetric indices of respiration by means of a pickup on the base of a rotating anemometer with a photoelectric or magnetoelectric contactless transformer.

E. I. Rimskikh. Miniature (200-g) transistorized supergenerator receiver, and a sensitive FM receiver for ARS-2 mobile radio stations with biotelemetric applications.

V. G. Denisov, M. M. Sil'vestrov, and B. A. Soshin. Use of biotelemetry in studies of spacecraft control systems with cosmonaut participation.

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ACCESSION NR: AP5004710

B. M. Stolbun and V. M. Forshtadt. First radiotelemetric investigation of the velocity of pulse waves during muscular activity, and the possibility of evaluating shifts in arterial tonus under these conditions.

A. T. Vorob'yev. Radioelectrocardiography of heavy athletes during training, and observation of short-term pathological shifts which disappear following exercise.

S. M. Ganyushkin. Radiotelemetric investigation of pulse and respiration rates in miners at work.

Yu. G. Solonin. Radiopulsometry to evaluate the burden of work in a hot microclimate; a change in the pulse rate from 180 to 192 in one minute was observed.

B. I. Yazburskis and B. P. Kushelevskiy. Use of biotelemetry in clinical studies.

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SKRYABIN, V.V.; ROZENBLAT, V.V.

Some data on the static strength of various groups of muscles.

Trudy Vses. ob-va fiziol., biokhim. i farm. 4:94-98 '58.

(MIRA 14:2)

1. Kafedra normal'noy fiziologii Sverdlovskogo meditsinskogo
instituta i Sverdlovskiy gorodskoy vrachebno-fizkul'turnyy dispanser.

(PHYSICAL EDUCATION AND TRAINING) (FATIGUE) (MUSCLES)

ROZENBLAT, V.V., kand.med.nauk, ODINTSOVA, N.V.,

Physical development of students of Sverdlovsk. Sov.zdrav. 17 no.
11:12-17 N'58 (MIRA 11:10)

1. Iz Sverdlovskogo gorodskogo vrachebno-fizkul'turnogo dispansera.
(GROWTH,
of university students (Rus))
(ADOLESCENTS,
physical develop. of university students (Rus))

KAZAKOV, M.B., ROZENBLAT, V.V.

Second conference in Sverdlovsk on problems in medical supervision
and exercise therapy. Sov.med. 22 no.5:141-143 My '58 (MIRA 11:7)
(PHYSICAL EDUCATION AND TRAINING)

ROZENBLAT, V.V., ZAKHAROV, V.A. [deceased]

Bloodless determination of circulation rate in man with the aid of oxyhemometer. Fiziol.zhur. 44 no.8:766-770 Ag!58 (MIRA 11:9)

1. Gorodskoy vrachebno-fizkul'turnyy dispanser, Sverdlovsk.
(BLOOD CIRCULATION, determination,
rate, bloodless oxyhemometric method (Rus))
(OXYGEN, in blood
oxyhemometric determ. of circ. rate (Rus))

ROZENBLAT, V.V.; DOMBROVSKIY, L.S.

Radio registration of the rate of cardiac contraction in freely moving subjects. Fiziol.zhur. 45 no.6:718-724 Je '59.
(MIRA 12:8)

1. From the Sports Medical Center, Sverdlovsk.

(HEART, physiol.

contraction rate recording by radio in freely moving subjects (Rus))

(RADIO AND TELEVISION

recording by radio of rate of cardiac contraction in freely moving subjects (Rus))

KAZAKOV, M.B.; ROZENBLAT, V.V.

Zonal conference on medical examination and exercise therapy held
in Sverdlovsk. Sov. med. 24 no. 7:148-150 J1 '60. (MIRA 13:8)
(EXERCISE THERAPY)

ROZENBLAT, Vladimir Viktorovich

[The problem of fatigue] Problema utomleniia. Moskva, Medgiz,
1961. 218 p. (MIRA 14:11)

(FATIGUE)

ROZENBLAT V.V.

Institute of Work Hygiene and Professional Pathology,
Sverdlovsk - "The dynamical radio-telemetry in sports
medicine" (17)

Report to be submitted for the 4th Intl. Conf. on
Medical Electronics, New York, N.Y., 16-21 July 1961

KATSNEL'SON, B.A.; KEDROV, B.D.; ROZENBLAT, V.V.

Radiotelemetric counting of respiration frequency under industrial conditions. Gig. i san. 26 no.11:61-65 N '61. (MIRA 14:11)

1. Iz Sverdlovskogo instituta gigiyeny truda i professional'noy patologii. (TELEMETER (PHYSIOLOGICAL APPARATUS)) (RESPIRATION)

ROZENBLAT, V.V.; VOROB'YEV, A.T.

Method for deriving cardiac biocurrents in man using dynamic
radiotelemetry. Biul. eksp. biol. i med. 52 no.10:119-122 0 '61.
(MLA 15:1)

1. Iz laboratorii meditsinskoy radioelektroiki (zav. - kandidat
meditsinskikh nauk V.V.Rozenblat) gorodskogo vrachebno-fizkul'turnogo
dispansera (glavnyy vrach M.B.Kazakov), Sverdlovsk. Predstavlena
deystvitel'nym chlenom AMN SSSR A.A.Letavet).
(ELECTROCARDIOGRAPHY)

ROZENBLAT, V.V.

Frequency of cardiac contractions during muscular activity in man under natural conditions; according to data of dynamic radio-telemetry. Fiziol.zhur. 48 no.12:1454-1465 D '62. (MIRA 16:2)

1. From the Laboratory for Functional Diagnosis, Research Institute of Occupational Hygiene and Professional Pathology; and from the Laboratory for Medical Radio-electronics, City Medical Dispensary for Physical Culture, Sverdlovsk.
(PULSE) (EXERCISE)

ACCESSION NR: AP4002640

S/0221/63/056/003/0341/0364

AUTHOR: Rozenblat, V. V. (Sverdlovsk)

TITLE: Dynamic biotelemetry

SOURCE: Uspekhi sovremennoy biologii, v. 56, no. 3, 1963, 341-364

TOPIC TAGS: biotelemetry, board biotelemetry, dynamic biotelemetry, relay biotelemetry, stationary biotelemetry, space physiology, medical monitoring, endoradiosonde, radio capsule, electrocardiogram, electroencephalogram, skin galvanic reaction, pneumogram

ABSTRACT: Soviet scientists distinguish the following types of biotelemetry: 1) "on-board" biotelemetry, used in aviation and space medicine, wherein the subject and the transmitter are aboard an airplane, rocket, or spaceship and move at great speed away from the ground receiving station; 2) dynamic biotelemetry, wherein an ambulant subject carries a radio transmitter while performing normal activities; 3) endoradiosonde biotelemetry, wherein miniature radio capsules introduced into body cavities (e.g., the gastrointestinal tract) transmit information on temperature, acidity, gastrointestinal motility, etc; 4) relay biotelemetry, combining "board" and dynamic biotelemetry;

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5) stationary biotelemetry, wherein physiological data are transmitted from one ground station to another by means of fixed transmitting and receiving devices. There are ten laboratories in the USSR presently engaged in research in biotelemetry. Frequencies 39 and 145 Mc were assigned by the Gosudarstvennaya inspektsiya elektrosvyazi (State Telecommunication Inspection) for this research making it possible for the laboratories to use the same kind of receivers. The construction of apparatus for recording the arterial pressure in ambulant subjects under conditions of vigorous activity is being studied. A teleelectrocardiograph constructed by T. Ye. Timofeyeva has been produced since 1962. Orig. art. has: 13 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 09 Jan 64

ENCL: 00

SUB CODE: AM

NO REF SOV: 050

OTHER: 053

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ROZENBLAT, V.V.; VOROB'YEV, A.T. (Sverdlovsk)

Electronics laboratory in the service of sports medicine.
Biul. Uch. med. sov. 3 no.4:24-27 J1-Ag '62. (MIRA 17:8)

ACCESSION NR: AP4015157

S/0219/64/057/002/0117/0121

AUTHOR: Unzhin, R. V.; Rozenblat, V. V.

TITLE: A transistorized device for radiotelemetric frequency recording of cardiac contractions, respiration, and movement

SOURCE: Byul. eksper. biologii i meditsiny*, v. 57, no. 2, 1964, 117-121

TOPIC TAGS: biotelemetry, radiotelemetric transistor device, KRP-3 radiotelemetric portable device, bioelectric recording device, heart contraction frequency, pneumogram, respiration movement frequency

ABSTRACT: Portable single-channel transistorized KRP-3 device weighing 120 g has been produced to record and transmit various physiological data on individuals while engaged in work or sports. The receiving-recording unit is not described here because of its basic similarity to other units of its type. The KRP-3 has separate pickups to record and transmit at different times the frequency of heart contractions according to the P wave of the cardiac biopotentials, chest pneumograms, and the frequency and duration of respiration phases or movements. The device includes a biocurrent amplifier,

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multivibrator, radio transmitter, and a single supply unit. To simplify operation, there are no controls except a connecting plug. Television transmission of recorded data will be described in forthcoming articles. With the increasing acceptance of radiotelemetric methods in physiological investigations, more miniature transistorized equipment of this type is needed. Orig. art. has: 3 figures.

ASSOCIATION: Laboratoriya funktsional'noy diagnostiki nauchno-issledovatel'skogo instituta gigieny* truda i profpatologii(Funotional Diagnostic Laboratory of the Scientific Research Institute of Labor Hygiene and Occupational Pathology); Laboratoriya meditsinskoy radioelektroniki gorodskogo vrachebno-fizul'turnogo dispansera, Sverdlovsk(Laboratory of Medical Radio Electronics of the Municipal Medical Physical Culture Dispensary)

SUBMITTED: 19Jan62

DATE ACQ: 12Mar64

ENCL: 00

SUB CODE: LS,EC

NR REF SOV: 010

OTHER: 003

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ROZENBLAT, V.V. (Sverdlovsk)

Dynamic biotelemetry. Usp. sov. biol. 96 no. 3: 323-362. 1963.
(MIRA 17:5)

ROZENBLAT, V. V.

"Vynoslivost' k staticheskim napryazheniyam kak antropometricheskiy pokazatel'."

report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences,
Moscow, 3-10 Aug 64.

ROZENBLAT, Yu.F., inzh.

The new SM-823 small electric tractor. Stroi. i dor. mash. 8 no.5:
30-31 My '63. (MIRA 16:5)

(Industrial electric trucks)

ROZENBLAT, Yu.F., inzh.

Unit for the production of cement-sand tile. Mekh. stroi. 20
no.4:28 Ap '63. (MIRA 16:3)
(Tiles) (Concrete plants--Equipment and supplies)

SITKOVSKIY, P.A.; KOMAROV, G.V.; BRUSENTSEV, V.F.; KREMENETSKIY, N.N.;
MAMAYEV, M.G., kand.tekhn.nauk; SMIRNOV, A.V., kand.tekhn.nauk;
AFANAS'YEV, I.V.; VOLOD'KO, I.F., kand.tekhn.nauk; BEGLYAROV, S.A.;
KONDRAT'YEV, V.V.; KARLINSKAYA, M.I.; NIKOLAYEV, M.I., kand.tekhn.
nauk; DOROKHOV, S.M.; PISHCHUROV, P.V.; KLIMENTOVA, A.V.; ROZENBLAT,
Zh.I.; PANDEYEV, V.V., kand.tekhn.nauk; KULIKOV, P.Ye.; SHIMANOVICH,
S.V.; DELITSIN, M.V., retsenzent; BRAUDE, I.D., retsenzent; BARYSHEV,
A.M., retsenzent; GRIGORYANTS, A.S., retsenzent; IGNATYUK, G.L.,
retsenzent; KALABUGIN, A.Ya., retsenzent; KREMENETSKIY, N.D.,
retsenzent; POPOV, K.V., retsenzent; ORLOVA, V.P., red.; LETNEV,
V.Ya., red.; SOKOLOVA, N.N., tekhn.red.; FEDOTOVA, A.F., tekhn.red.

[Handbook for hydraulic and agricultural engineers] Spravochnik
gidrotekhnika melioratora. Moskva, Gos.izd-vo sel'khoz.lit-ry,
1958. 766 p. (MIRA 12:3)
(Hydraulic engineering) (Agricultural engineering)

ROZENBLAT-ROT, M.

Entropy of stochastic processes. Dokl. AN SSSR 112 no.1:16-19 Ja '57.
(MLRA 10:2)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
Predstavleno akademikom A.N.Kolmogorovym.
(Chains (Mathematics)) (Probabilities)

67552

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46(1) 16.6100 16.9400

SOV/20-130-2-6/69

AUTHOR: Rozenblat - Rot, M.

TITLE: Normed ϵ -Entropy of Sets and Transmission of Information
From Continuous Sources Through Continuous Communication
Channels

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 2,
pp 265 - 268 (USSR)

ABSTRACT: The normed (minimum) ϵ - entropy of the space $\mathcal{U}$ is intro-
duced as the difference $H_\epsilon(\mathcal{U}) - \log \mu(\mathcal{U})$, where
 $H_\epsilon(\mathcal{U}) = \log N_\epsilon(\mathcal{U})$ is the magnitude used by Kolmogorov
in [Ref 4,5]. The notion is applied to the approximation
of probability fields and of probability theoretical
transition functions. Furthermore the author treats appro-
ximations of stochastic processes and channels and the
fundamental theorems of Shannon. Altogether he gives 7
lemmata and 4 theorems.
The author thanks Kolmogorov, Academician of the Academy of
Sciences for posing the problem and consultation.

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Normed ϵ -Entropy of Sets and Transmission of Information From Continuous Sources Through Continuous Communication Channels SOV/20-130-2-6/69

There are 12 references, 11 of which are Soviet, and 1 American.

ASSOCIATION: Universitet imeni Parkhona, Fakultet matematiki i fiziki
(University imeni Parkhon, Faculty of Mathematics and Physics)
Matematicheskiy institut Rumynskoy Akademii nauk Bukharest
(Mathematical Institute of the Roumanian Academy of Sciences,
Bucharest, Roumania)

PRESENTED: August 10, 1959, by A.N. Kolmogorov, Academician

SUBMITTED: July 27, 1959

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ACCESSION NR: AP4039633

S/0052/64/009/002/0238/0261

AUTHOR: Rosenblatt-Roth, M. (Rozenblat-Rot, M.) (Bucharest)

TITLE: Concept of entropy in probability theory and its application to the theory of information transmission along communication channels

SOURCE: Teoriya veroyatnostey i yeye primeneniya, v. 9, no. 2, 1964, 238-261

TOPIC TAGS: entropy, information theory, communication channel, stationary process, ergodicity

ABSTRACT: Part of the results of this work were reported by the author at the Third Inter-Union Mathematics Congress (Moscow, 1956), at the Fourth Congress of Rumanian Mathematicians (Bucharest, 1956), at the Second National Conference of the Academy of Sciences, RNR on automation of industry (Bucharest, 1957), and other conferences. A lecture course in information theory was given on the basis of these results in the physico-mathematics department of the University. This article contains the basic results of the author's doctoral dissertation, part of which was previously published. The results of previous works are contained in the general assertions obtained here as special cases. It is known that entropy of continuous fields is infinite, and thus one is concerned with ϵ -entropy.

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ACCESSION NR: AP4039633

Differential entropy is involved in $\mathcal{E}$ -entropy as a unique component depending on the given field. On the other hand, in the properties $\mathcal{E}_t(A)$, $\mathcal{E}_t(A|B)$, which play a basic role in all information theory (where entropy is involved for discrete sources and channels) differential entropy is involved in the case of continuous sets of states. The importance of the concept of differential entropy is also clarified by the fact that the amount of information about a random object contained in another random object can be represented as the difference of two differential entropies. Despite the indicated differences, the properties of entropy of discrete fields and differential entropy of continuous fields (sources, channels respectively) are studied simultaneously, and entropy is obtained formally as a special case of differential entropy. The word "entropy" could be substituted for "differential entropy" and the continuous case omitted. Authors in this field usually study fields and processes with a finite number of states. A source is usually assumed to have the statistical structure of a stationary process, and the transmission channel is considered stationary. However one can have information theory on more general assumptions if the sources and channels satisfy the following conditions: sources A (stationary or not) have finite differential entropy (or entropy) $h_t(A)$ and the property $\mathcal{E}_t(A)$; channels (stationary or not) have a finite rate of information transmission $I_t(A,B)$ and the property $\mathcal{I}_t(A,B)$. Thus one can obtain new results not only for

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non-stationary channels and sources, but also for stationary ones, since, for the properties (A) , (A,B) , ergodicity is only a sufficient condition but not a necessary one. From the information point of view, regular sources and channels are never worse than stationary ergodic sources and channels. "The author expresses his deep gratitude and thanks to his teacher, Academician A. N. Kolmogorov, for his help during the author's post-graduate work at MGU and especially in the completion of this work. The author also expresses his gratitude to Yu V. Prokhorov, S. Kh. Sirazhdinov, R. L. Dobrushin, and B. A. Sevast'yanov for their valuable advice and attention to this work." Orig. art. has: 77 formulas.

ASSOCIATION: Bukharest, Romy*nskaya Narodnaya Respublika, Universitet im. K. Parkhona, fakul'tet matematiki i fiziki (Bucharest, Rumanian People's Republic University, Department of Mathematics and Physics)

SUBMITTED: 29Dec59

DATE ACQ: 19Jun64

ENCL: 00

SUB CODE: EC, MA

NO REF SOV: 022

OTHER: 012

Card 3/3

ACCESSION NR: AP4036712

S/0020/64/156/002/0261/0263

AUTHOR: Rozenblat-Rot, M.

TITLE: On the relative stability of sums bound in a Markov chain of positive random values

SOURCE: AN SSSR. Doklady*, v. 156, no. 2, 1964, 261-263

TOPIC TAGS: Markov chain, relative stability, sequence, ergodicity coefficient

ABSTRACT: Let us assume that ξ_k ($k = 1, 2, \dots$) is a series of random values bound in a Markov chain, which assume only positive values, α_i is the coefficient of ergodicity of the i -transitional probability function of the chain; $\alpha^{(n)} =$

$\min_{1 \leq i \leq n} \alpha_i > 0$, $S_n = \sum_{i=1}^n \xi_i$. The sums S_n are relatively stable if some sequence of numbers $A_n > 0$ ($n = 1, 2, \dots$) exists, for which

$$P(|A_n^{-1} S_n - 1| \geq \delta) \rightarrow 0 \quad (n \rightarrow \infty) \quad (1)$$

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ACCESSION NR: AP4036712

for any value of $\delta > 0$. In conclusion, the author claims that if the random values ξ_k ($k = 1, 2, \dots$) are independent of the derived theorems, that is $\alpha^{(n)} = 1$ ($n=1, 2, \dots$) then the respective results obtained by A. Khintchine (Giornale dell Istituto Italiano degli Attuari, 7, 365, 1963) and A. A. Bobrov (Uch. Zap. UGU, v. 146, Matematica, 3, 92, 1950) will apply in this case. Orig. art. has: 11 equations and 9 theorems.

ASSOCIATION: Facultet matematiki i mekhaniki. Bukharestskogo universitet. Bukharest, Rummyanskaya Narodnaya Respublika (University of Bucharest, Department of Mathematics and Mechanics)

SUBMITTED: 13May63

DATE ACQ: 03 Jun64

ENCL: 00

SUB CODE: MA

NO REF SOV: 003

OTHER: 001

Card 2/2

ROZENBLAT-ROT, M.

The law of large numbers and the strong law of large numbers
for inhomogeneous Markov chains. Dokl. AN SSSR 147 no.6:
1294-1295 D '62. (MIRA 16:1)

1. Fakul'tet matematiki i fiziki Universiteta im. K. I.
Parkhona, Bukharest, Rumyniya. Predstavleno akademikom A. N.
Kolmogorovym.

(Markov processes) (Probabilities)

S/020/63/149/001/003/023
B112/B186

AUTHOR: Rozenblat-Rot, M.

TITLE: On the statistics of interconnected tests

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 1, 1963, 30 - 31

TEXT: The following and a similar theorem are derived: let the random quantity ξ have a uniformly absolutely continuous distribution function $F^{(i)}(x)$ at the instant i , and let the empirical test distribution functions $F_n(x)$ be interconnected in a homogeneous Markov chain, the ergodic coefficients of which fulfil the condition $\min_{1 \leq i \leq n} \alpha_i = O(n^{-\beta})$ ($0 \leq \beta < 1$).

Then $P\left\{\sup_{-\infty < x < +\infty} \left|F_n(x) - \sum_{i=1}^n F^{(i)}(x)/n\right| \rightarrow 0, n \rightarrow \infty\right\} = 1$.

ASSOCIATION: Fakul'tet matematiki i mekhaniki Bukharestskogo universiteta, Rumyniya (Division of Mathematics and Mechanics of the University of Bucharest, Rumania)

Card 1/2

On the statistics of ...

S/020/63/149/001/003/023
B112/B186

PRESENTED: November 14, 1962, by A. N. Kolmogorov, Academician

SUBMITTED: March 24, 1962

Card 2/2

ROZENBLAT-ROT, M.

Strengthened law of large numbers for inhomogeneous Markov chains.
Dokl. AN SSSR 141 no.6:1310-1312 D '61. (MIRA 14:12)

1. Fakul'tet matematiki i fiziki universiteta im. Parkhona, Bukharest, Rumyniya. Predstavleno akademikom A.N.Kolmogorovym.
(Markov processes)

44536

S/020/62/147/006/005/034
B112/B186

AUTHOR: Rozenblat-Rot, M.

TITLE: The law of large numbers and the strengthened law of large numbers for inhomogeneous Markov chains

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 6, 1962, 1294-1295

TEXT: The quantities $\alpha^{(n)} = \min_{1 \leq i \leq n} \alpha_i$ are introduced, where α_i is the ergodicity factor of the i -th transition probability of a certain inhomogeneous Markov process. For the quantities

$$\sigma_m^{-1} = l^{2m} \alpha^{(l^{m+1})}, \quad \omega_i^{-2} = \sum_{m=q}^{\infty} \sigma_m,$$

where $q = [\log i / \log l]$, the following results are obtained: A sequence of random quantities ξ_i which correspond to an inhomogeneous Markov chain with $\alpha^{(n)} > 0$ and $n\alpha^{(n)} \rightarrow \infty (n \rightarrow \infty)$ will obey the law of large numbers if

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The law of large numbers and ...

S/020/62/147/006/005/034
B112/B186

$$\lim_{n \rightarrow \infty} (1/n^2 \alpha^{(n)}) \sum_{i=1}^n D \xi_i = 0,$$

or if

$$\sum_{n=1}^{\infty} (D \xi_n / \omega_n^2) < \infty.$$

The latter condition will be replaced by the inequality

$$\sum_{n=1}^{\infty} (D \xi_n / n^2 \alpha^{(n)}) < \infty$$

if $\sigma_{m+1} < k \sigma_m$ ($k < 1$; $m \geq q$).

ASSOCIATION: Fakul'tet matematiki i fiziki universiteta im. K. I. Parkhona, Bukharest, Rumyniya (Department of Mathematics and Physics of the University imeni K. I. Parkhon, Bucharest, Rumania)

Card 2/3

The law of large numbers and ...

S/020/62/147/006/005/034
B112/B106

PRESENTED: June 27, 1962, by A. N. Kolmogorov, Academician

SUBMITTED: March 24, 1962

Card 3/3

ROZENBLAT-ROT, M.

Law of large numbers for heterogeneous Markov chains. Dokl.
AN SSSR 134 no.2:278-281 S '60. (MIRA 13:9)

1. Fakul'tet matematiki i fiziki Universiteta im. Parkhona i
Matematicheskii institut Rumynskoy Akademii nauk, Bukharest,
Rumyniya. Predstavleno akad. A.N. Kolmogorovym.
(Chains (Mathematics))

ROZENBLAT-ROT, M.

Theory of transmission of information through stochastic communication channels. Dokl. AN SSSR 112 no.2:202-205 Ja '57. (MLRA 10:4)

1. Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova.
Predstavleno akademikom A. N. Kolmogorovym.
(Information theory)

ROZENBLAT-ROT, M.

ROZENBLAT-ROT, M.: "The concept of entropy in the theory of probability and its application to the theory of information transmission along communication channels." Moscow Order of Lenin and Order of Labor Red Banner State U imeni M. V. Lomonosov. Moscow, 1956. (Dissertation for the Degree of Candidate in Physicomathematical in Sciences).

SO: Knizhaya Ietopis', No 23, 1956

32421

S/020/61/141/006/003/021
C111/C333

16.6100

AUTHOR: Rozenblat-Rot, M.

TITLE: A strengthened law of large numbers for inhomogeneous Markov chains

PERIODICAL: Akademiya nauk SSSR, Doklady, v. 141, no. 6, 1961, 1310-1312

TEXT: Let α_i be the ergodicity coefficient of the i -th probability theoretical transition function of an in general instationary Markov chain (see R. L. Dobrushin (Ref. 1: Teoriya veroyatn. i yeye primenen., 1, v. 1, 72 (1956); Ref. 2: Teoriya veroyatn. i yeye primenen., 1, v. 4, 365 (1956))). Let denote $\eta_n = \max_{1 \leq i \leq n-1} (1 - \alpha_i)$, $1 - \eta_n = O(n^{-\beta})$

($0 < \beta < 1$). Let I be the set of the natural numbers.

Theorem 1: If a sequence of random variables $\xi_i (i \in I)$ which are connected in an inhomogeneous Markov chain with ergodicity coefficients $\alpha_i > 0 (i \in I)$ satisfies the condition

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A strengthened law of large numbers ... C111/C333

$$\sum_{n=1}^{\infty} \frac{D_n^{\beta}}{n^{2-\beta}} < +\infty,$$

then it obeys the strengthened law numbers. If $\alpha_i > \beta > 0$ ($i \in I$), then this condition attains the form

$$\sum_{n=1}^{\infty} \frac{D_n^{\beta}}{n^2} < +\infty,$$

where it is the best one in the following sense: If the series $\sum_{n=1}^{\infty} \frac{b_n}{n^2}$ diverges for a sequence of nonnegative constants b_n , it is possible to construct a sequence of random variables ξ_n ($n \in I$) which are connected in a Markov chain (which does not degenerate into a sequence of independent random variables) with $D\xi_n = b_n$, $\beta = 0$, which does not obey the strengthened law of large numbers.

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A strengthened law of large numbers ... C111/C333

Theorem 2: If $D\xi_i \leq C < \infty$ ($i \in I$) under the assumptions of theorem 1, then the sequence ξ_i ($i \in I$) obeys the strengthened law of large numbers.

Theorem 3: If in a discrete Markov chain with $\alpha_i > 0$ ($i \in I$) the probability of occurrence of the event i in the k -th attempt is equal to $p_k^{(i)}$, and if $\mu^{(i)}$ is the number of occurrences of the event i in the n first attempts, then

$$P \left\{ \lim_{n \rightarrow \infty} \left(\frac{\mu^{(i)}}{n} - \frac{p_1^{(i)} + p_2^{(i)} + \dots + p_n^{(i)}}{n} \right) = 0 \right\} = 1$$

Let $\Omega = \{\omega_k\}$ be an at most denumerable system of disjoint Borel sets on the real line R , where $\bigcup_k \omega_k = R$. The set of all real

random variables ξ is assumed to be decomposed into disjoint classes

$\Lambda = \Lambda(\Omega)$ so that $P\{\xi \in \omega_k\} = \varphi_\Lambda(k)$ only depends on Λ

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A strengthened law of large numbers ...
and not on $\xi \in \Lambda$ for all k . All ξ contained in the same class Λ
are called Ω -equally distributed. Let $\omega_k = \{k \leq x < k+1\}$,
 $\Omega = \{\omega_k\} (k \in I)$.

Theorem 4: For a sequence of Ω -equally distributed random variables
 $\xi_n \in \Lambda (n \in I)$ which are connected in an instationary Markov chain
with $\alpha_i > 0 (i \in I)$, the existence of a certain random variable
 $\xi \in \Lambda$, which possesses a finite moment of order $1 + \beta$, is sufficient
for the applicability of the strengthened law of large numbers. If
 $\alpha_i > \delta > 0 (i \in I)$ (e. g. in the case of independent ξ_n), then
for this it is sufficient that there exists a certain random variable
 $\xi \in \Lambda$ with finite mathematical expectation.

Theorem 5: The existence of the mathematical expectation is necessary
and sufficient for the applicability of the strengthened law of large
numbers to a sequence of random variables which are equally distributed

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S/020/61/141/006/003/021

A strenthened law of large numbers ... C111/C333

and connected in a homogeneous Markov chain with ergodicity coefficient $\alpha > 0$.

Theorem 6: Let μ_i be the number of occurrences of the event i in n consecutive attempts according to the law of a homogeneous Markov chain with $\alpha > 0$, and let p_i be the probability of the occurrence of the event i in every attempt; then it holds

$$P \left\{ \lim_{n \rightarrow \infty} \frac{\mu_i}{n} = p_i \right\} = 1.$$

The author mentions: A. N. Kolmogorov, V. J. Romanovskiy, T. A. Sarymsakov and Yu. V. Prokhorov.

There are 8 Soviet-bloc and 2 non-Soviet-bloc references.

ASSOCIATION: Fakul'tet matematiki i fiziki universiteta im. Parkhona Bukharest, Rumyniya (Faculty of Mathematics and Physics of the University im. Parkhon, Bucharest, Rumania)

PRESENTED: July 26, 1961, by A. N. Kolmogorov, Academician

SUBMITTED: November 28, 1960

Card 5/5

ROZENBLATT, A. M.

SOV/144-58-9-18/18

AUTHOR: Gikis, A. F., Candidate of Technical Sciences, Docent
TITLE: Inter-University Scientific Conference on Electric
Measuring Instruments and Technical Means of Automation
(Mezhvuzovskaya nauchnaya konferentsiya po
elektroizmeritel'nym priboram i tekhnicheskim sredstvam
avtomatiki)
PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Elektromekhanika,
1958, Nr 9, pp 130-135 (USSR)
ABSTRACT: The conference was held at the Leningradskiy
elektrotekhnicheskii institut imeni V. I. Ul'yanova
(Lenina) (Leningrad Electro-technical Institute imeni
V. I. Ul'yanov (Lenin)) on November 11-15, 1958. The
representatives of eleven higher teaching establishments
and three research institutes participated and a large
number of specialists of various industrial undertakings
were present.
Professor A. M. Rozenblatt (Institute of Automation and
Telemechanics, Ac.Sc. USSR) presented an exhaustive
review paper on "Application of magnetic amplifiers in
automation and metering". Magnetic amplifiers permit
Card 1/13 execution of five basic logical operations and, therefore,

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Instruments and Technical Means of Automation

they can be applied in discrete operation automation equipment.

Professor A. V. Fateyev (Leningrad Electro-Technical Institute imeni V. I. Ul'yanov (Lenin)) read the paper "Present state and prospects in the development of the theory and technique of automatic control", reviewing present trends in the theory of automatic regulation, development of the theory of linear systems of automatic control and giving an outline of the present state of the theory of non-linear systems, systems of optimizing control, self-setting systems and impulse control systems.

Docent F. A. Stupel' (Khar'kov Polytechnical Institute) in his paper "Present-day designs of an electro-magnetic automation mechanisms" outlined the characteristics of individual types of electro-magnetic mechanisms and the main trends in the design of electro-magnetic contactors, relays, polarized relays, fast electro-magnets, electro-magnetic couplings and special electro-

Card 2/13 magnetic mechanisms for programme control.

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Professor N. G. Boldyrev (Leningrad Electro-Technical Institute) in his paper "Stability of discrete automatic systems with back coupling" has shown that the final automatic device can always be synthesized from elements possessing only two states, 0 and 1, which are linked into a finite number of elementary circuits.

Docent A. M. Melik-Shakhnazarov (Azerbaijani Industrial Institute imeni M. Azizbekov) in his paper "Problems of automation of a.c. compensation mechanisms" gave a systematic review of the problem and quoted practical examples of auto-compensation equipment used in various branches of engineering.

Docent A. S. Rozenkrants (Ivanovo Power Institute imeni V. I. Lenin) in his paper "Automatic a.c. bridges and compensators" emphasized the acute demand for automatic instruments for comparing alternating currents. The fields of application of such instruments could be considerably extended if they would be designed for

Card 3/13 operating at a wider frequency range. He considered it

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advisable to base the automation of such comparison
instruments on using a phase sensitive indicator and
has described a bridge of this type which was built
at the Ivanovo Power Institute.

Yu. A. Skripnik (Kiyev Polytechnical Institute)
reported on a phase sensitive switch indicator of
semi-equilibrium of a.c. bridges.

Professor L. F. Kulikovskiy (Kuybyshev Industrial
Institute imeni V. V. Kuybyshev) presented a paper
on "Some new types of a.c. compensators".

Assistant Ye. I. Tenyakov (Novocherkassk Polytechnical
Institute imeni S. Ordzhonikidze) presented the paper
"Certain problems of designing automatic d.c. potentio-
meters of high accuracy with numerical reading off".

Aspirant D. I. Malov (Novocherkassk Polytechnical
Institute) presented the paper "High accuracy automatic
d.c. bridge with numerical reading off".

Assistant V. A. Ivantsov (Novocherkassk Polytechnical
Institute) presented the paper "Measuring element

Card 4/13 for accurate automatic comparison metering instruments

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with numerical reading off"; the sensitivity threshold of such instruments must be of the order of 10 μ V and 30 μ V in a bridge-circuit in the case of an input resistance of at least 100 kOhm. The response time should be of the order of 5 msec. The design of the instrument described by him is based on an a.c. amplifier, whereby the d.c. voltage to be measured is transformed into a.c. by a vibrator with a noise level of the order of 1 μ V. The instrument is phase sensitive and stability against overloads was achieved by using a 2-way diode limiter. Docent B. M. Smolov (Leningrad Electro-Technical Institute) read the paper "Non-linear electronic voltage transformers with a numerical output", in which he considered two methods of transforming voltages into a numerical code.

V. P. Skuridin (Ural Polytechnical Institute imeni S. M. Kirov) presented the paper "New counters based Card 5/13 on polarized relays". These do not suffer from the

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disadvantage of existing counters, namely, that the results are lost if the current supply is accidentally interrupted.

Professor A. V. Fremke and Docent Ye. M. Dushin (Leningrad Electro-technical Institute) presented the paper "Metering transducers for automatic instruments with discrete types of recording".

Candidate of Technical Sciences V. B. Ushakov and P. N. Kopay-Gora (Scientific Research Institute for Computers) presented the paper "Computing equipment for automatic centralized control of production parameters".

Candidate of Technical Sciences V. B. Ushakov presented the paper "Certain trends in the development of analogue computers and of computing devices intended for use in industry".

Candidate of Technical Sciences B. V. Shamray (Leningrad Electrotechnical Institute) presented the paper "Low inertia transducer of thermo e.m.f. into a d.c. voltage", operating with magnetic elements of an input resistance

Card 6/13 of 100 Ohm, a signal of 0.001 V and an output voltage

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of 40 V with a resistance of 4000 Ohm.

Docent G. A. Alizade (Azerbaijani Industrial Institute
Imeni M. Azizbekov) presented the paper "New d.c. metering
transducers with a high input resistance" (phase
sensitive transducer in d.c. compensators and
particularly its application in the chemical industry).

Docent P. V. Novitskiy (Leningrad Electrotechnical
Institute) presented the paper "Apparatus for measuring
vibration parameters"; described a piezo-electric
accelerometer with a range of 10 to 10 000 c.p.s., a
sensitivity of 3 to 7 mV/m/sec² with an error of up to
2.5%.

Candidate of Technical Sciences D. A. Borodayev
(Ural Polytechnical Institute) presented the paper
"Instruments for ultra-sonic monitoring of the level
and the pressure of liquids" which was one of a series
of papers on measuring non-electrical magnitudes by

Card 7/13 electric methods.

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Corresponding Member of the Ac.Sc. USSR Professor
K. B. Karandeyev presented the paper "Application of
semi-conductors for metering purposes".

Assistant G. N. Novopashenny presented the paper
"Metering amplifiers with semi-conductor triodes".

Docent Ya. V. Novosel'tsev, Assistants N. A. Smirnov,
Ye. Ye. Afanas'yev and Ye. P. Ugryumov (Leningrad

Electrotechnical Institute) presented the paper
"Semi-conductor precision instrument for measuring
the frequency by the method of counting impulses".

The described instrument enables measuring the
frequency of harmonic oscillations which occur once
only; the frequency of the input oscillations is
amplified 24 times and the error in measurement does
not exceed 2×10^{-5} .

A number of papers were presented on measuring and
producing instruments based on recently discovered
physical phenomena.

Professor Ye. G. Shramkov and Junior Scientific Worker
S. A. Spektor (Leningrad Polytechnical Institute

Card 8/13 imeni M. I. Kalinin) presented the paper "Measurement

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of large d.c. currents by the method of nuclear magnetic resonance", which permits measuring with an error below 0.1%; the built experimental instrument was suitable for measuring currents up to 35 000 A with an error not exceeding 0.05%.

Professor N. N. Shumilovskiy (Moscow Lenin Order Power Institute) presented the paper "Basic trends of development of radio-active methods of automatic control of production processes"; he dealt with sources of metering errors and methods of improving the accuracy.

Professor Ya. Z. Tsypkin (Institute of Automatics and Telemechanics, Ac.Sc. USSR) presented the paper "On certain features and potentialities of impulse automatic systems". He dealt particularly with "compensation" delay in impulse automatic systems, impulse extremal and self-setting systems and basic trends in the development of impulse circuits.

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Assistant M. M. Fetisov (Leningrad Polytechnical Institute) presented a paper on the "Basic problems of the theory of automatic electric metering instruments with reverse transformation for measuring non-electrical magnitudes". The method is based fundamentally in compensating the measured non-electrical magnitude with a similar magnitude produced by means of a transducer.

Professor R. R. Kharchenko (Moscow Lenin Order Power Institute) presented the paper "Determination of the dynamic errors of a magneto-electric oscillograph by means of analogues".

N. F. Suvid (Kiyev Polytechnical Institute) presented the paper "Measurements using magnetic bridges".

In addition to this, three further papers were read on magnetic measurements.

Candidate of Technical Sciences P. G. Nikitin and Senior Lecturer D. A. Bezukladochnikov (Ural Polytechnical Institute) read the paper "Measuring the potential of a magnetic field by means of bismuth resistance and Hall

Card 10/13 e.m.f. pick-ups"; he described a new method of producing

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bismuth spirals by electrolytic deposition of bismuth inside grooves of a base made of insulation material. Senior Lecturer V. A. Ferents (Kazan' Aviation Institute) presented the paper "High sensitivity magnetic gas analysers for oxygen"; the increased sensitivity was achieved by separating the heat sensitive element from the heating element.

Docent P. P. Ornatskiy (Kiyev Polytechnical Institute) presented the paper "Measurement of electrical magnitudes at infra-low frequencies by electric indicating instruments of various systems"; this is of interest since there is a demand for instruments operating at frequencies of 1.5 to 0.5 c.p.s.

Docent R. I. Yurgenson (Leningrad Electrotechnical Institute) presented the paper "Methods of ensuring stability against interference in discrete selection systems" in which he dealt with the principles of ensuring active and passive stability against interference in the transmission of

Card 11/13 codes used for transmitting discrete data.

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Docent Ya. V. Novosel'tsev (Leningrad Electrotechnical Institute) presented the paper "Averaging, differentiation and smoothing of time functions reproduced by electric signals".

B. S. Ryabyshkin and V. P. Filippov (Siberian Physico-Technical Scientific Research Institute) presented the paper "Electronic analogue correlator"; this was developed at the Tomsk Ionospheric Station for calculating the correlation functions in studying the winds in the ionosphere.

Docent L. I. Stolov (Kazan' Aviation Institute) presented the paper "Certain characteristics of asynchronous micro-motors" (see pp 38-44 of this issue) in which he considers motors with symmetrical windings. The mechanical and the speed characteristics of such motors are investigated on the basis of equations of a 4-pole.

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At the closing session the results were summarized of this conference and resolutions were passed. In particular it was decided to publish the transactions

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of this conference.

ASSOCIATION: Novocherkasskiy politekhnicheskiy institut
(Novocherkassk Polytechnical Institute)

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USCOMM-DC-60,873

ROZENBLIT, A.B.

Temperature compensation for the meters of electric conductivity of solutions by means of semiconductor thermistors.
Priboestroenie no.5:9-11 My '63. (MIRA 16:8)

ACCESSION NR: AP3000246

S/0119/63/000/005/0009/0011

AUTHOR: Rozenblit, A. B.

TITLE: Thermistor-type temperature compensation for solution-conductivity meters

SOURCE: Priborostroyeniye

TOPIC TAGS: thermistor, conductivity meter, MMT-4 thermistor

ABSTRACT: The accuracy of the electric-conductivity meters used for measuring concentration of salt, alkali, and acid solutions largely depends on the meter's temperature compensation. Two thermistor circuits are offered (for unbalanced and balanced bridges) for temperature compensation; they are based on a certain similarity between the temperature characteristics of thermistors and solutions taken in a narrow range of concentrations. Theoretical substantiation of the method is provided, as well as a numerical example in which type MMT-4 thermistor is considered. Orig. art. has: 12 formulas, 3 figures, and 1 table.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 14Jun63

ENCL: 00

Card 1/2

ACCESSION NR: AP3000246

SUB CODE: IE,CH

NO REF SOV: 000

OTHER: 000

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ROZENBLIT, A.B.

Automatic control of the performance of evaporator batteries for
the concentration of aluminate solutions in the production of
alumina. TSvet. met. 36 no.3:43-49 Mr '63. (MIRA 16:5)
(Aluminum oxide) (Evaporating appliances) (Automatic control)

ROZENBLIT, A. G.

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(Magnetic amplifiers)

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21-27 N '56. (MLRA 9:12)

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(Magnetic amplifiers)

ROZENBLIT, G.B., inzh.

Nonstationary heat transfer from gas to the wall of the operating
cylinder of a diesel locomotive engine. Vest.TSNII MPS 21
no.2:7-11 '62. (MIRA 15:4)
(Diesel locomotives) (Heat---Transmission)

ROZENBLIT, G.

Coal miners control the production. Sov.shakht. 11 no.6:25-26 Je
'62. (MIRA 15:6)

1. Predsedatel' prezidiuma postoyanno deystvuyushchego
proizvodstvennogo soveshchaniya, pomoshchnik glavnogo mekhanika
Korkinskogo ugol'nogo razreza No.1-2.

(Chelyabinsk Basin--Coal mines and mining)
(Employees' representation in management)

ROZENBLIT, G.B.

Measuring minor changes in temperature on the surface of a solid
body. Izv. tekhn. no. 2:24-27 F '62. (MIRA 15:2)
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ROZENBLIT, G.B., inzh.

Study of the thermal conditions of the D100 engine with "gunning"
of the engine. Teplovoz.i sud.dvig. no.3:211-218 '62.

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(Diesel engines)

ROZENBLIT, G.B.

Method of investigating the heat transfer in a diesel engine
by means of an analysis of temperature variations in the
combustion chamber walls. Trudy KHIIT no.46:121-132 '61.
(MIRA 15:12)

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mashinostroyeniya imeni V.A.Malysheva.
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GRINSBERG, Filipp Grigor'yevich; ROZENBLIT, Gennadiy
Borisovich; SIMSON, Al'fred Eduardovich; NAYDENKO, O.A.,
kand. tekhn. nauk, retsenzent; RABOVSKIY, V.V., inzh.,
retsenzent; VOLKOVICH, G.F., retsenzent; ZAKHARENKO, B.A.,
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sudakh s elektrodvizheniem. [By A.A. Kurits i dr. Leningrad,
Sudpromgiz, 1963. 276 p. (MIRA 17:1)]

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S/115/62/000/002/004/009
E032/E414

AUTHOR: Rozenblit, G.B.

TITLE: Measurement of small temperature oscillations on the surface of a solid body

PERIODICAL: Izmeritel'naya tekhnika, no.2, 1962, 24-27

TEXT: It is pointed out that in studies of heat transfer in machines in which the temperature and the pressure vary within wide limits during each cycle of operation, it is necessary to measure temperature oscillations on the surface of the walls surrounding the working region. The measurement of small temperature oscillations immediately on the surface of a solid body is said to be very difficult. Tests carried out with thermocouples inserted to a small depth below the surface showed that this is a possible method of measuring wall temperature oscillations. Periodic changes in the wall temperature at a depth x below the surface can then be Fourier-analysed and the expansion coefficients and phases can be determined. If the amplitudes are then multiplied by $\exp(x\sqrt{k\omega/2a})$ and the phases by $x\sqrt{k\omega/2a}$, then the resulting quantities will correspond to the surface of the Card 1/2

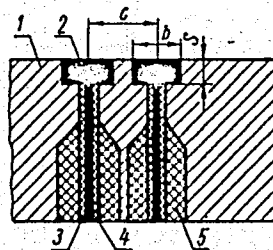
Measurement of small temperature ...

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E032/E414

wall (a - temperature diffusivity; other symbols not defined). Having determined these parameters, the temperature variation on the surface can be deduced by Fourier synthesis. The author has used this method to determine temperature oscillations within the wall of the combustion chamber of a locomotive diesel engine 2Д100 (2D100). The method of insertion of the thermocouples is illustrated in Fig.1. Two methods are put forward whereby the effective depth of the hot junction of the thermocouple may be determined. There are 2 figures and 2 Soviet-bloc references.

Fig.1.

- 1 - wall,
- 2 - hot junction,
- 3 - insulator,
- 4 - thermocouple wire,
- 5 - dental cement.



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ROZENBLIT, G.L., kand. tekhn. nauk

Loads on tower headframes. Shakht. stroi. 9 no.9:15-17
S '65. (MIRA 18:9)

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yuzhnykh rayonakh SSSR.

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Advantage of using headframes for multirope hoisting. Shakht.
stroil. no.8:6-8 Ag '59. (MIRA 12:11)

1. Yuzhgiprosnakht.
(Mine hoisting)

ROZENBLIT, G.L., kand.tehkn.nauk

Basic principles of planning and designing reinforced concrete head-frames without struts. Shakht. stroi. no.8:11-15 Ag '60.
(MIRA 13:11)

1. Yuzhgiproshakht.
(Mine hoisting)

ROZENBLIT, G.L., kand. tekhn. nauk.

Approximation method to calculate the mouth of a vertical shaft.
Shakht. stroi no.1:16-21 '58. (MIRA 11:2)

1. Yuzhgiproshakht. (Shaft sinking)

ROSENTHAL, G.I.

Stal'nyye Konstruktsii Zdaniy i Sooruzheniy Ugol'noy Promyshlennosti
(Steel Construction of Buildings And Installations In The Coal Industry)
Moskva, Ugletekhizdat, 1953.

270 p. Illus., Diagr., Tables.

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